

US006539778B2

(12) United States Patent Tucker et al.

(10) Patent No.:

US 6,539,778 B2

(45) Date of Patent:

Apr. 1, 2003

(54) SUBSEA VEHICLE ASSISTED PIPELINE COMMISSIONING METHOD

(75) Inventors: David M. Tucker, Katy, TX (US);

Charles R. Yemington, Arlington, TX

(US)

(73) Assignee: Valkyrie Commissioning Services,

Inc., Houston, TX (US)

(*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

(21) Appl. No.: 09/892,314

(22) Filed: Jun. 26, 2001

(65) Prior Publication Data

US 2002/0129641 A1 Sep. 19, 2002

Related U.S. Application Data

(60)	Provisional	application	No.	60/275,215,	filed	on	Mar.	13,
	2001.							

(51)	Int. Cl. ⁷	••••••	G01M 3/04
(52)	IIS CI		73/40 5

405/158, 170, 190, 191; 134/8

(56) References Cited

U.S. PATENT DOCUMENTS

			Nolan, Jr. et al 61/72.3
4,229,121 A	*	10/1980	Brown 405/158
5,044,827 A	*	9/1991	Gray et al 405/173
5,267,616 A	*	12/1993	Silva et al 166/311
5,842,816 A	*	12/1998	Cunningham 405/170
			-

5,883,303 A *	3/1999	Bliss et al 73/49.1
5,927,901 A *	7/1999	Graves 405/158
6,022,421 A *	2/2000	Bath et al 134/8
6,170,493 B1 *	1/2001	Sivacoe 134/8
6,234,717 B1 *	5/2001	Corbetta 405/170
6,336,238 B1 *	1/2002	Tarlton 15/3.5

FOREIGN PATENT DOCUMENTS

GB	2 195 739 A	*	4/1988	B08B/9/04
JP	6-226185	*	8/1994	B05C/7/08

OTHER PUBLICATIONS

U.S. 20020059687A1 , May 23, 2002, Smith et al., 15/104.062.*

U.S. 20020040782A1 Apr. 11, 2002, Rytlewski et al., 166/341.*

* cited by examiner

Primary Examiner—Daniel S. Larkin Assistant Examiner—Charles D. Garber (74) Attorney, Agent, or Firm—Kurt S. Myers

(57) ABSTRACT

The present invention is directed to a method for completing the commissioning of a subsea pipeline by purging with a compressed gas to dewater and dry the line wherein the operation is done on the seabed. More specifically, the method is carried out with a subsea vechicle (hereinafter "SV") that powers pumps located on the seabed or are carried by the SV to inject/remove chemical, dewater, and dry, the pipeline. The present invention may be part of the commissioning of a new or old pipeline or a new portion of a pipeline in which a purging of the line with a compressed gas and drying of the line is required. After commissioning, product flows through the pipeline.

6 Claims, 15 Drawing Sheets

